REMARKS

Applicant wishes to thank Examiner Dowling for having allowed claims 93 through 96 — and also for having indicated that claims 3 through 5, and claims 7 and 16, would be allowable if suitably amended. Applicant has so amended claims 3, 4, 7 and 16, and notes that claim 5 depends from claim 4; accordingly the Applicant believes that all five of these claims are now in condition for allowance.

Applicant also thanks the Examiner for having pointed out an error in dependency of claim 81, which is discussed below.

Claim objections

In the August 14 Official Action at page 2 it is said, "Text is missing" from claim 66. The claim appears to be complete in the undersigned's file copy of the September 14, 2002 Amendment; however, in any event the full text of claim 66 is also presented — with revisions — in this present Amendment. The claim and its revisions are discussed below.

Claim rejections under § 112

In the Action at page 2 it is als said that claims 80 and 81 are inconsistent. Applicant agrees, and has accordingly n w revised claim 81 to correct this error.

Claim rejections under § 103

a) DEFINING THE WAVELENGTH LIMITATION — Further in the Official Action it is said (pages 3 through 7) that many of Applicant's claims are unpatentable over combinations of Knize with Minich or Yamakazi. As to claims 2 and 6, and claims depending from those two claims, the Action explains (particularly at pages 3 and 5) that the Applicant's reasoning is unpersuasive because of Applicant's claim recitations of "about 635 nanometers or longer". The Action sets forth the position that "about 635" encompasses 630.

The Applicant has now revised claims 2 and 6 — and claim 1 as well — all without prejudice, to instead recite "equal to 635 nanometers or longer". In view of the above-cited explanation in the Action, Applicant believes that these revisions should bring at least claims 2 and 6, and their dependent claims, into condition for allowance. In case this understanding is mistaken, Applicant respectfully asks that the Examiner telephone the undersigned to clarify the posture of these claims.

Applicant also respectfully submits that the corresponding revision of claim 1 also brings that claim into condition for allowance. The rationale expressed in the Official Action at paragraph 4 (two subparagraphs at bottom of page 6) appears to apply to claim 1 as well as claims 2 and 6.

b) COMBINING BLUE AND GREEN WITH LONG-WAVELENGTH RED — In the Action it is further said, "It is well established that red, blue, and green lights may be c mbined to form white and black images" — and later that "the mixture of the light can inher ntly be used t form c lors such as black, white." Th undersigned

assumes that these remarks are directed particularly to claims 6, 80, 81, 83 and 84.

Applicant respectfully traverses. It is true that red, blue and green are known in the abstract as combinable to produce gray or white — but this is an extremely broad-brush statement of general knowledge, whereas the present claims include several specialized limitations: the sources are lasers; the red wavelength includes, or is exclusively, 635 nm or longer; and a reflective LCLV is used. The cited references neither teach nor suggest such specifics in combination; but Applicant has found that just these very specifics are particularly advantageous in just this combination.

Furthermore the present application points out (e. g. page 50) that workers with laser projectors have adopted a specialized contrary approach. The art teaches away (emphasis added):

> "Heretofore, as mentioned earlier in this document, cyan has been systematically removed from laser beams for image-projection use, thereby both discarding a large fraction of the light power in the beam and making the achievement of good whites and blacks more awkward."

Thus the conventional practice in this field is counter to good image quality. The Applicant respectfully submits that reversing this conventional practice in laser projectors is extraordinary and patentable. The specification continues from the foregoing excerpt (emphasis added):

> "In my present invention accordingly a very significant increase in available beam power is enjoyed, while at the same time col r mixing is enhanc d — not nly al ng the n utral axis or at the surface of the color-gamut s lid, but thr ughout — merely by refraining fr m exclusion of naturally ccurring cyan lines."

Applicant would be glad to inc rporate such a specific recitation into at least some of claims 80, 81, 83 and 84 if the Examiner deems it helpful. Applicant respectfully submits, however, that in the context established by claim 1 — namely, wavelength exceeding 635 nm — the simple recitation of "incorporating blue and green laser light" is sufficient to distinguish the art. (As the specification makes clear, additional advantages of speckle suppression also accrue through retaining naturally occurring cyan lines.)

c) "INFINITE SHARPNESS" PROJECTION — In the Official Action, evidently with particular regard to claims 66 through 69, 73, and 89 through 92, it is also said (emphasis added):

> "Any projector may be made to project onto any surface simply by pointing the projector in that direction. Such operation is an intended use of the claimed structure."

Applicant respectfully points out, however, that projectionists do not point conventional projectors onto viewing surfaces of the character recited in these claims, namely (claim 66) —

> "an irregular projection medium having portions at distinctly differing distances from the projector"

and in particular do not do so to (claim 67) "display a protracted show".

The reason: a conventional projector cannot form a sharp image on such surfaces; blur will appear on at least some. This would be extremely unsatisfact ry viewing f r an audience (which is recited in both these claims), particularly if protracted.

The capability of the present invention to f rm a sharp image on surfaces at numerous distinctly differing distances is ne

of the most remarkable features f the invention. It is extensively discussed and explained in the application, e. g. at:

page 57, line 18, through page 59 line 19;

page 63, lines 4 through 13;

page 69, lines 9 through 22;

page 71, line 17, through page 73 line 15;

page 80, line 11, through page 81 line 8; and

page 134, line 13, through page 149 line 7.

Although the original claim wording is believed sufficient to distinguish the art, Applicant in the interest of advancing this case toward issue has proposed amendment language which incorporates the condition that the invention form the image sharply on the viewing surfaces at "distinctly differing distances". The Applicant submits that this capability is not divulged in the cited references and will not be enjoyed by the devices described therein.

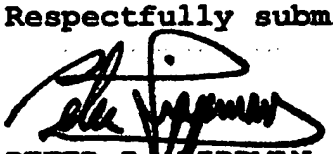
Applicant is the first to describe how to make and operate a laser projector that does have this capability. Accordingly the Applicant is believed to be entitled to reasonably broad protection for this so-called "infinite sharpness" capability.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests the Examiner's favorable reconsideration and allowance of all the claims n w standing in this case. It is

respectfully requested that, should there appear any further obstacle to allowance of the claims herein, the Examiner telephone the undersigned attorney to try to resolve the obstacle.

Respectfully submitted,



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January 14, 2004